Exhibit B

Methamphetamine Use Among Pregnant Women

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OBJECTIVE: To estimate trends in the prevalence of methamphetamine treatment during pregnancy in the United States.

METHODS: Data were obtained from the Treatment Episode Data Set, an administrative data set that captures admissions to federally funded treatment centers in the United States. Demographic and treatment-related measures were examined among women admitted for methamphetamine use and stratified by year of admission to assess trends over time.

RESULTS: From 1994 to 2006 there were 245,970 pregnant women admitted. In 1994, methamphetamine accounted for 8% of admitted pregnant women, rising to 24% by 2006. This proportion was higher than methamphetamine admissions among both nonpregnant women (12%) and men (7%). The majority of methamphetamine admissions occurred in the West (73%) among white (64%) unemployed (88%) women. Over the time of analysis, women admitted for methamphetamine treatment became sicker (measured by increasing co-occurring psychiatric disorders) and more marginalized (measured by increasing dependent-living situations and criminal justice involvement).

CONCLUSION: Methamphetamine has become the primary substance compelling treatment during pregnancy. Our findings suggest a need for more effective drug and alcohol screening by clinicians who are positioned to identify and address such concerns outside the criminal justice system.

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LEVEL OF EVIDENCE: III

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Methamphetamine may be the 21st century's first drug "epidemic." Although overall use prevalence has remained stable since 2002,[1] methamphetamine treatment admissions have continued to rise[2] as have related emergency room visits.[3,4] In 2006, more than 400,000 reproductive-aged women stated they had used methamphetamine in the prior month; these women constitute nearly 40% of all female substance users.[5]

Prenatal substance use is a perennial public health and clinical concern.[6] Although animal studies have described various sequelae related to prenatal methamphetamine exposure, thus far the only consistent association in human research is with low birth weight.[7,8] Arguably more important are social, economic, and psychological disadvantages that accompany illicit drug use.[9,10] Pregnant substance users face elevated risks of poverty,[11] psychiatric disorders,[12] histories of child sexual abuse,[13] and current domestic violence.[14] All of these factors affect subsequent child development[15,16] and maternal health throughout the life course.[17]

National data regarding prenatal methamphetamine use are hard to capture due to social stigma, negative provider attitudes toward such behaviors, and providers' desire to maintain patient confidentiality within clinical and public health administrative systems.[18] National prevalence estimates vary markedly depending on study designs and sampled populations (Terplan M. Why is there no moral panic surrounding methamphetamine use in pregnancy in the US? [abstract]. Adiktologie 2008; Supplement 2) and range from 0.7%[16] to 5.2%.[19]

This study was undertaken to estimate trends in the prevalence of methamphetamine treatment during pregnancy. Pregnant women who enter treatment can be considered to experience actual disorders, beyond the level of "casual" use.[20] Furthermore, by investigating treatment admissions, we focus on a population whose disorders result in particularly high social costs. Moreover, pregnancy presents a window of opportunity, within which institutional support coupled with a motivation for behavioral change heighten the possibility of beneficial outcomes.

MATERIALS AND METHODS

Admissions data were obtained from the Treatment Episode Data Set (TEDS) an administrative data system designed to track admissions into substance treatment facilities that receive federal funding. Treatment Episode Data Set data are collected by all 50 States (including Washington DC and Puerto Rico) and submitted to the federal government. Treatment Episode Data Set was established in the Substance Abuse and Mental Health Data Archive and is maintained at the University of Michigan.[21] It includes records for some 1.5 million substance treatment admissions annually. In 1997, TEDS was estimated to include 83% of all eligible drug or alcohol treatment admissions in the United States.[22] All data are automatically checked as they are submitted through the internal control process in TEDS. Validation and verification checks are run on the data as they are being entered. The system will not allow any data that are out of range or violate skip patterns to be saved into the database.[23]

At intake, treatment programs record data regarding basic client characteristics and substance use. Substance use was based on client self-report. Treatment Episode Data Set provides data on service setting, number of prior treatments, primary referral source, employment status, presence of psychiatric problems, living arrangements, health insurance, substance(s) used, route of administration, age at first use, pregnancy status, demographic data on age, and race or ethnicity. For confidentiality, identifying information on clients or providers are removed from publicly available data.

Our analysis included all admissions in TEDS from 1994 to 2006 in which 1) the client was indicated as pregnant at the time of admission and 2) the data listed a primary substance of use. We started in 1994 because it is the first year for which there has been uniform reporting for all data fields and ended in 2006 because it is the last year of data availability. We focused on methamphetamine admissions, defined as any admission for which methamphetamine or amphetamine was the primary substance that led to the treatment episode. We did not separate amphetamines from methamphetamines because states varied within the subclassification of these substances. Some states, for example, did not report methamphetamine as separate from amphetamine. However, for the states that made this distinction, methamphetamines constituted about 95% of all stimulant admissions.[24] For ease of discussion, we refer to all methamphetamine or amphetamine admissions as methamphetamine admissions.

In addition to the existent TEDS variables, we constructed two additional covariates: polysubstance use was considered present if either a secondary or a tertiary substance was reported. An admission was considered to originate from the criminal justice system if the principle source of referral was from any police official, probation officer, or a Federal, State, or county judicial system.

We began our analysis by examining univariable statistics on basic measures. Then we described these characteristics among methamphetamine admissions. To assess data trends over time, we explored interactions (and accompanying *P* values) between year and all demographic variables in sequential logistic models. The results were stratified by year of admission to represent trends over time.

For simplicity, only the results from every fourth year are reported in the tables. Stata 10.0 (StataCorp LP, College Station, TX) was used for all analysis.

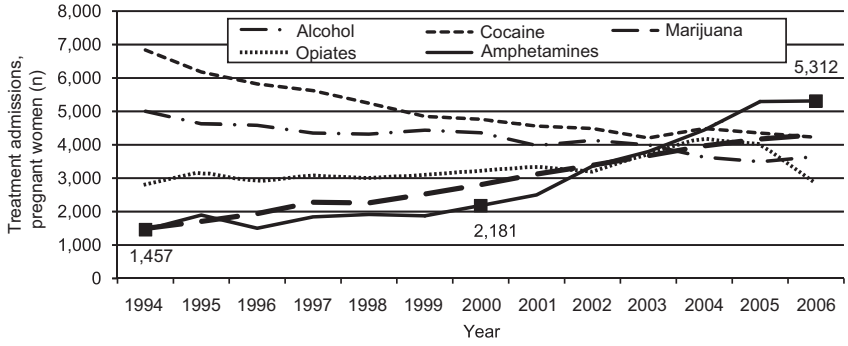

Fig. 1. Primary substance among pregnant women in substance treatment. *Terplan. Methamphetamine Treatment Among Pregnant Women. Obstet Gynecol 2009.*

Table 1. Treatment Admissions in 2006 (Treatment Episode Data Set)

	No. of Admissions	Methamphetamine as Primary Substance (%)
Men	1,228,493	6.9
Nonpregnant women	553,234	12.4
Pregnant women	22,382	23.7

Because TEDS is publicly available without subject identification, the University of Chicago Institution Review Board exempted this study from review.

RESULTS

From 1994 to 2006, we identified a total of 245,970 pregnant women who were admitted in TEDS, of which, 2,779 (1.1%) had data missing for the primary substance leading to the treatment episode. Therefore our data set included the 243,191 pregnant admissions for which a substance compelling treatment could be identified.

From 1994 to 2006 the number of pregnant admissions increased from 18,034 to 22,382. Alcohol and cocaine declined as a primary substance of use through this time period, whereas methamphetamine and marijuana use increased. In 1994 methamphetamine accounted for 8% of admitted pregnant women. Since 2003 methamphetamine has been the most common primary substance for treatment admissions among pregnant women, and in 2006 it accounted for 24.0% of admissions (Fig. 1). Compared with men and nonpregnant women, rates of methamphetamine admissions are highest among pregnant women (Table 1).

Table 2. Demographic Characteristics of Pregnant Methamphetamine Admissions

Characteristic	1994	1998	2002	2006	*P* for Trend
Age (y)					
20 or younger	268 (18.4)	369 (19.3)	654 (19.5)	878 (16.5)	<.001
21–29	859 (59.1)	1,007 (52.6)	1,892 (56.3)	3,259 (61.4)	
30–39	314 (21.6)	497 (26.0)	730 (21.7)	1,050 (19.8)	
40 or older	13 (0.9)	42 (2.2)	86 (2.6)	122 (2.0)	
Race					
White	1,105(75.9)	1,352 (71.3)	2,171 (64.7)	3,343 (63.5)	<.001
African American	38 (2.6)	57 (3.0)	117 (3.5)	187 (3.5)	
Hispanic/Latina	187 (12.8)	312 (16.5)	758 (22.6)	1,265 (23.9)	
Other	126 (8.7)	174 (9.2)	308 (9.2)	490 (9.3)	
Region					
Midwest	61 (4.2)	203 (10.6)	416 (12.4)	740 (13.9)	<.001
Northeast	10 (0.7)	3 (0.2)	6 (0.2)	23 (0.4)	
South	21 (1.4)	104 (5.4)	305 (9.1)	654 (12.3)	
West	1,365 (93.7)	1,606 (83.8)	2,635 (78.4)	3,895 (73.3)	
Primary income*					
Wages/retirement	41 (19.5)	108 (24.0)	203 (22.9)	467 (22.1)	<.001
Public assistance	103 (49.1)	101 (22.4)	181 (20.4)	326 (15.4)	
Other	34 (16.2)	97 (21.6)	212 (23.9)	468 (22.1)	
None	32 (15.2)	144 (32.0)	290 (32.7)	856 (40.4)	
Living arrangement*					
Homeless	56 (16.3)	117 (16.5)	144 (11.8)	840 (16.1)	<.001
Supervised	88 (25.6)	191 (26.9)	340 (27.9)	1,725 (33.1)	
Independent	200 (58.1)	402 (56.6)	733 (60.2)	2,643 (50.8)	
Unemployed	1,342 (92.7)	1,709 (89.6)	2,966 (90.0)	4,677 (88.3)	<.001
Health insurance*					
Private insurance	13 (4.4)	15 (3.0)	40 (4.0)	47 (2.3)	<.001
Medicaid	123 (42.0)	166 (33.3)	343 (34.7)	761 (36.9)	
Medicare	19 (6.5)	34 (6.8)	32 (3.2)	325 (15.8)	
None	138 (47.1)	284 (56.9)	575 (58.1)	931 (45.1)	
Psychiatric problems*	60 (4.6)	156 (9.8)	326 (10.9)	627 (15.8)	<.001
High school diploma	678 (44.8)	882 (47.2)	1,598 (48.8)	2,696 (51.1)	<.001
Marital status*					
Never married	163 (50.6)	329 (48.3)	683 (51.5)	1,602 (59.4)	<.001
Currently married	67 (20.8)	126 (18.5)	267 (20.1)	526 (19.5)	
Separated	46 (14.3)	94 (13.8)	148 (11.2)	216 (8.01)	
Divorced/widowed	46 (14.3)	132 (19.4)	229 (17.3)	354 (13.1)	

Data are n (%).
* More than 10% missing in this variable.

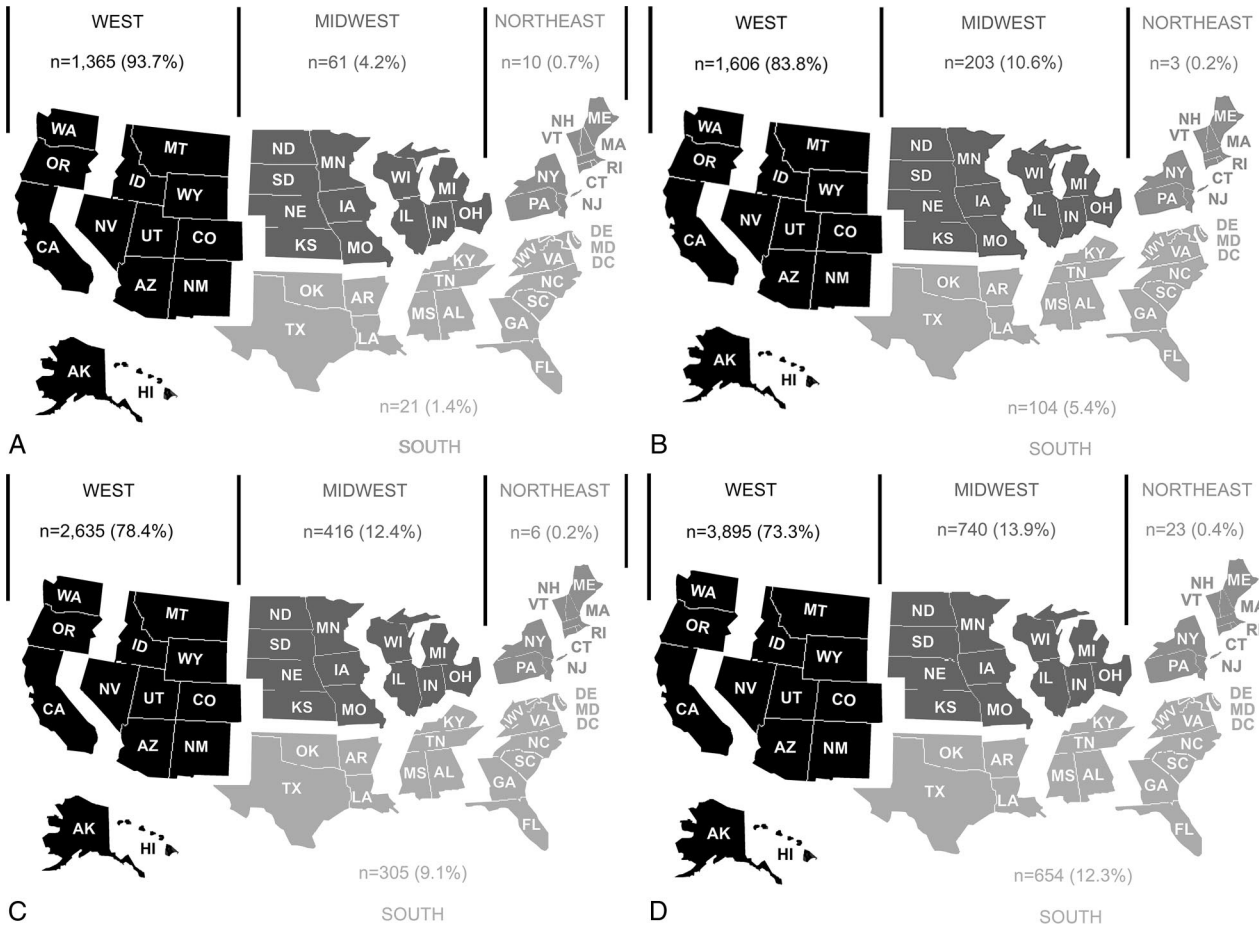

Fig. 2. Regional distribution of methamphetamine treatment admissions among pregnant women in 1994 **(A)**, 1998 **(B)**, 2002 **(C)**, and 2006 **(D)**. Each region (West, Midwest, Northeast, and South) is shown in a different shade of black or gray. Source: Energy Information Administration (October 2008).

Terplan. Methamphetamine Treatment Among Pregnant Women. Obstet Gynecol 2009.

Table 2 focuses on the characteristics of methamphetamine admissions during pregnancy by year. Overall, these admissions were associated with white ethnicity, unemployment, unmarried status, and residence in Western states. Pregnant Hispanic or Latina admissions increased significantly over the study period from 13.5% to 23.9%, whereas African-American admissions remained low, accounting for less that 4% for each year.

We observed a dramatic change in client source of income among methamphetamine admissions. Although those reporting wage, retirement, or other income remained fairly stable, public assistance receipt dropped from 49.1% to 15.4%. In contrast, admissions reporting no source of income increased from 15.2% to 40.4%. Although most pregnant women are Medicaid-eligible, more than 50% of admitted pregnant women reported no health insurance. Admissions with Medicaid dropped slightly from 42.0% to 36.9%, whereas admissions with Medicare more than doubled from 6.5% to 15.8%, perhaps reflecting the increase in admissions with co-occurring psychiatric disorders, which rose from 4.6% to 15.8%. Admissions that described independent living arrangements decreased from 58.1% to 50.8%, whereas admissions from supervised settings such as a residential institution or a group home increased from 25.6% to 33.1%. Although polysubstance use was common among methamphetamine admissions, it declined over the time frame from 70.6% to 62.4%.

We observed geographic differences in pregnant methamphetamine admissions over time. In 1994, fully 93.7% of methamphetamine admissions were concentrated in Western states. By 2006, admissions in the South and Midwest had increased substantially, and accounted for 26.2% of all admissions. There was little change over the time period among admissions in the Northeast, which remained below 1% (Fig. 2).

The substance-related characteristics of pregnant methamphetamine admissions are detailed in Table 3. Smoking was the most common method of administration, followed by injecting. There was no meaningful change in the route of drug administration over time. Aside from a decrease in the proportion of admissions reporting no prior treatments from 1994 (55.7%) to 1996 (48.9%), there was little change in the number of prior treatment admissions in the study population over time.

We observed a large increase in the proportion of admissions originating in the criminal justice system from 29.4% to 40.6%. The average age of first methamphetamine use did not differ appreciably across the time frame, with the categorical median age remaining between 15 and 17 years. The majority of admissions were admitted into ambulatory substance treatment; however, the proportion of those entering residential facilities increased over the time period from 21.4% to 31.7%.

DISCUSSION

The trends we observed are similar to those observed in other populations.[16,25,26] Our results confirm a spreading pattern of methamphetamine use from an initial concentration of predominantly white women in the West to increasing numbers in the Midwest and Southeast, including an increasing proportion of Hispanic or Latina women.

Methamphetamine disorders now account for one quarter of all admissions of pregnant women into substance-abuse treatment. Overall, we observed an increase in indicated medical and psychiatric comorbidity among admitted pregnant methamphetamine users. Methamphetamine intoxication and withdrawal have been associated with psychotic symptoms,[27] which worsen with long-term use. Thus, the increase in co-occurring disorders may reflect consequences of long-term use. Methamphetamine admissions seem to reflect increasing social disadvantage. We observed an increase in admissions arising from the criminal justice system, Medicare-funded admissions, those from supervised living situations, and those among women reporting no source of income.

Since 1996, substance use disorders are no longer qualifying diagnoses for the receipt of federal disability assistance.[28] Cash assistance caseloads have markedly declined among both drug-using and non–drug-using pregnant and parenting women.[29] These results are reflected in TEDS data. In 1994, nearly one half of pregnant methamphetamine admissions reported receiving public assistance; in 2006, 40% reported no source of income. Declining welfare receipt among pregnant substance users is of concern, especially when coupled with findings that welfare reform has adversely affected first-trimester prenatal care initia-

Table 3. Substance Use Characteristics of Pregnant Methamphetamine Admissions

Characteristic	1994	1998	2002	2006	*P* for Trend
Polysubstance use	1,020 (70.0)	1,310 (68.4)	2,209 (65.7)	3.293 (61.9)	<.001
No. of substances reported					
1	437 (30.0)	606 (31.6)	1,153 (34.3)	2,019 (38.0)	<.001
2	504 (34.6)	648 (33.8)	1,213 (36.1)	2,451 (46.1)	
3	516 (35.4)	662 (34.6)	996 (29.6)	842 (15.9)	
Criminal justice referral	426 (29.4)	683 (36.8)	1,360 (41.9)	2,157 (40.6)	<.001
Type of treatment					
Detoxification	67 (4.6)	138 (7.2)	195 (5.8)	282 (5.31)	<.001
Residential	311 (21.4)	534 (27.9)	1,028 (30.6)	1,685 (31.7)	
Ambulatory	1,079 (74.1)	1,244 (64.9)	2,139 (63.6)	3,345 (63.0)	
Route of use					
Smoke	1,057 (73.5)	1,357 (73.2)	2,417 (73.8)	4,129 (78.3)	<.001
Intravenous	279 (19.4)	411 (22.2)	665 (20.3)	914 (17.3)	
Oral/other	102 (7.1)	87 (4.7)	194 (5.9)	229 (4.3)	
Prior treatments					
None	778 (55.7)	846 (49.5)	1,542 (50.4)	2,567 (49.9)	<.001
1–4	596 (42.6)	817 (47.8)	1,396 (45.7)	2,397 (46.6)	
5 or more	24 (1.7)	47 (2.8)	119 (4.0)	182 (3.5)	
Age at first use (y)					
20 or younger	1,089 (75.6)	1,392 (73.1)	999 (73.5)	4,045 (76.7)	<.001
21–29	306 (21.2)	422 (22.2)	310 (22.8)	1,008 (19.1)	
30–39	45 (3.1)	43 (4.9)	45 (3.3)	211 (4.0)	
40 or older	1 (0.1)	4 (0.5)	6 (0.4)	7 (0.1)	

Data are n (%).

tion among low-income women[30] and has hindered their ability to receive substance treatment.[31]

Another disquieting trend was the increase in criminal justice referrals. This raises the possibility that drug and alcohol screening is occurring in the criminal justice system rather than in health care settings. About one half of the admissions stated that they had no health insurance, despite the fact that most low-income pregnant women are Medicaid-eligible. Although it is unclear what proportion of admissions in our study had accessed prenatal care before treatment admission, lack of health insurance among treatment admissions suggests that clients' first institutional contact was often with the criminal justice system or substance abuse treatment and not prenatal care. Ethnographic studies indicate that pregnant substance users face greater stigmatization than their nonpregnant counterparts.[31,32] Although the desire for behavioral change may be strong in pregnancy, substance-using women may be afraid to seek prenatal care out of fear of prosecution or child protection intervention.[33] This is unfortunate, because prenatal care has shown improvement in birth outcomes, even given continued substance use.[34]

Some of our findings are consistent with that of a "maturing" drug epidemic.[35] As the negative consequences of a particular substance become more manifest, use begins to concentrate in a more disadvantaged, older group. Not all of our data, however, support this hypothesis. In our study, the age upon admission remained the same; unemployment slightly decreased; and the proportion of admissions with a high school diploma increased. Unfortunately, TEDS does not distinguish treatment readmissions, a variable that would aid greatly in describing methamphetamine as an epidemic.

Addiction is a chronic, relapsing disorder. Readmissions are thus common.[36] Given such readmissions, observations are not fully independent, violating conventional hypothesis test assumptions. In focusing on pregnant women, we probably lessen this statistical concern. Our study population likely contains fewer repeat observations of the same individual than would a study of the overall treatment population.

Our study has several other limitations. Most important, TEDS draws only from treatment units that receive federal funds. Although TEDS captures more than 80% of U.S. treatment admissions, exclusion of private facilities likely biases the sample toward greater disadvantage.

Methamphetamine-related treatment admissions are rising among pregnant women, as are accompanying burdens of medical and social comorbidities. The prevalence of such admissions remains low in the context of four million annual U.S. births. Yet these patterns raise concerns for both women's life course and for psychosocial development of children. Since 2003, methamphetamine has been the primary drug of abuse among pregnant women admitted to drug treatment in the U.S. This is especially of concern because little is known regarding its perinatal effects. Our findings suggest a need for more effective drug and alcohol screening by clinicians, who are positioned to identify and address such concerns outside the criminal justice system.

Finally, by focusing an enquiry on treatment admissions, we are focusing on the population whose substance abuse and dependence results in a high financial cost to society. Pregnancy presents a window of opportunity within which institutional support coupled with a motivation for behavioral change heighten the possibility of positively affecting both the woman and her family.

REFERENCES

1. Substance Abuse and Mental Health Services Administration. Results from the 2005 National Survey on Drug Use and Health: national findings. DHHS Publication No. SMA 06-4194. Report No.: H-30. Rockville (MD): U.S. Department of Health and Human Services; 2006.
2. Substance Abuse and Mental Health Services Administration. Treatment Episode Data Set (TEDS). Highlights–2005. National admissions to substance abuse treatment services. DHHS Publication No. (SMA) 07-4229. Report No.: DASIS Series: S-36. Rockville (MD): U.S. Department of Health and Human Services; 2006.
3. Cox S, Posner SF, Kourtis AP, Jamieson DJ. Hospitalizations with amphetamine abuse among pregnant women. Obstet Gynecol 2008;111:341–7.
4. Substance Abuse and Mental Health Services Administration. Drug Abuse Warning Network, 2004: national estimates of drug-related emergency department visits. DHHS Publication No. (SMA) 06-4143. Report No.: DAWN Series D-28. Rockville (MD): U.S. Department of Health and Human Services; 2006.
5. Substance Abuse and Mental Health Services Administration. Results from the 2006 National Survey on Drug Use and Health: national findings. DHHS Publication No. SMA 07-4293. Report No.: NSDUH Series H-32. Rockville (MD): U.S. Department of Health and Human Services; 2007.
6. Kim J, Krall J. Literature review: effects of prenatal substance exposure on infant and early childhood outcomes. Berkeley (CA): University of California at Berkeley; 2006.
7. Smith L, Yonekura ML, Wallace T, Berman N, Kuo J, Berkowitz C. Effects of prenatal methamphetamine exposure on fetal growth and drug withdrawal symptoms in infants born at term. J Dev Behav Pediatr 2003;24:17–23.
8. Smith LM, Lagasse LL, Derauf C, Grant P, Shah R, Arria A, et al. The infant development, environment, and lifestyle study: effects of prenatal methamphetamine exposure, polydrug exposure, and poverty on intrauterine growth. Pediatrics 2006;118:1149–56.

9. Cho DH, Lyu HM, Lee HB, Kim PY, Chin K. Behavioral teratogenicity of methamphetamine. J Toxicol Sci 1991;16 suppl:37–49.
10. Weissman AD, Caldecott-Hazard S. Developmental neurotoxicity to methamphetamines. Clin Exp Pharmacol Physiol 1995; 22:372–4.
11. Hunt D, Kuck S, Truitt L. Methamphetamine use: lessons learned. Report No.: 209730. Washington (DC): U.S. Department of Justice; 2006.
12. Kissin WB, Svikis DS, Morgan GD, Haug NA. Characterizing pregnant drug-dependent women in treatment and their children. J Subst Abuse Treat 2001;21:27–34.
13. Medrano MA, Zule WA, Hatch J, Desmond DP. Prevalence of childhood trauma in a community sample of substance-abusing women. Am J Drug Alcohol Abuse 1999;25:449–62.
14. Datner EM, Wiebe DJ, Brensinger CM, Nelson DB. Identifying pregnant women experiencing domestic violence in an urban emergency department. J Interpers Violence 2007;22: 124–35.
15. Carta JJ, Atwater JB, Greenwood CR, McConnell SR, McEvoy MA, Williams R. Effects of cumulative prenatal substance exposure and environmental risks on children's developmental trajectories. J Clin Child Psychol 2001;30:327–37.
16. Derauf C, Lagasse LL, Smith LM, Grant P, Shah R, Arria A, et al. Demographic and psychosocial characteristics of mothers using methamphetamine during pregnancy: preliminary results of the infant development, environment, and lifestyle study (IDEAL). Am J Drug Alcohol Abuse 2007;33:281–9.
17. Newcomb MD, Locke T. Health, social and psychological consequences of drug use and abuse. In: Sloboda Z, editor. Epidemiology of drug abuse. New York (NY): Springer Science; 2005. p. 45–62.
18. Herzig K, Huynh D, Gilbert P, Danley DW, Jackson R, Gerbert B. Comparing prenatal providers' approaches to four different risks: alcohol, tobacco, drugs, and domestic violence. Women Health 2006;43:83–101.
19. Arria AM, Derauf C, LaGasse LL, Grant P, Shah R, Smith L, et al. Methamphetamine and other substance use during pregnancy: preliminary estimates from the Infant Development, Environment, and Lifestyle (IDEAL) Study. Matern Child Health J 2006;10:293–302.
20. Hubbard RL. The role of treatment data in studying the epidemiology of substance use and abuse. In: Sloboda Z, editor. Epidemiology of drug abuse. New York (NY): Springer Science; 2005. p. 225–33.
21. Substance Abuse and Mental Health Services Administration OoAS. Treatment Episode Data Set (TEDS), 1994–2006 [Computer file]. Ann Arbor, MI: U.S. Department of Health and Human Services; Inter-university Consortium for Political and Social Research [producer and distributor]; December 8, 2006.
22. Substance Abuse and Mental Health Services Administration. Treatment Episode Data Set (TEDS) 1992–1997 National Admissions to Substance Abuse Treatment Services, Appendix B. Office of Applied Studies, HHS 1999 August; DASIS Series: S-7. Available at: http://www.dasis.samhsa.gov/teds97/id51.htm. Retrieved April 2, 2009.
23. Substance Abuse and Mental Health Services Administration. Substance Abuse and Mental Health Services Administration FY 2008 Annual Performance Report. Department of Health and Human Services; Office of Applied Studies; 2008. Available at: http://www.samhsa.gov/Budget/FY2008/SAMHSA_FY08_APR.pdf. Retrieved April 1, 2009.
24. Substance Abuse and Mental Health Services Administration. Treatment Episode Data Set (TEDS): 1995–2005. National admissions to substance abuse treatment services. Report No.: DHHS Publication No. (SMA) 07-4234. Rockville (MD): U.S. Department of Health and Human Services; 2007.
25. Azadi A, Dildy GA 3rd. Universal screening for substance abuse at the time of parturition. Am J Obstet Gynecol 2008; 198:e30–2.
26. Buchi KF, Zone S, Langheinrich K, Varner MW. Changing prevalence of prenatal substance abuse in Utah. Obstet Gynecol 2003;102:27–30.
27. Perez-Reyes M, White WR, McDonald SA, Hicks RE, Jeffcoat AR, Hill JM, et al. Clinical effects of daily methamphetamine administration. Clin Neuropharmacol 1991;14:352–8.
28. Personal Responsibility and Work Opportunity Reconciliation Act of 1996, Pub.L. 104–193, 110 Stat. 2105, Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (1996).
29. Pollack HA, Reuter P. Welfare receipt and substance-abuse treatment among low-income mothers: the impact of welfare reform. Am J Public Health 2006;96:2024–31.
30. Gavin NI, Adams EK, Manning WG, Raskind-Hood C, Urato M. The impact of welfare reform on insurance coverage before pregnancy and the timing of prenatal care initiation. Health Serv Res 2007;42:1564–88.
31. Rosenbaum M. Women on heroin. 2nd ed. Newark (NJ): Rutgers University Press; 1981.
32. Ettore E. Revisioning women and drug use: gender, power and the body. New York (NY): Palgrave Macmillan; 2007.
33. Chavkin W, Breitbart V, Elman D, Wise PH. National survey of the states: policies and practices regarding drug-using pregnant women [published erratum appears in Am J Public Health 1998;88:438 and 820]. Am J Public Health 1998;88:117–9.
34. Kukko H, Halmesmaki E. Prenatal care and counseling of female drug-abusers: effects on drug abuse and perinatal outcome. Acta Obstet Gynecol Scand 1999;78:22–6.
35. Caulkins JP. Models pertaining to how drug policy should vary over the course of a drug epidemic. Adv Health Econ Health Serv Res 2005;16:397–429.
36. McLellan AT, Lewis DC, O'Brien CP, Kleber HD. Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. JAMA 2000;284:1689–95.